22 /266/ Natural conditions have an overwhelming effect in shaping and determining the form of the material culture of the Yamana. This is equally true of the neighboring Selk'nam /Ona/ (Vol. I, 192). Since the indispensable conditions for gardening and farming, as well as for animal husbandry, are lacking, they can only be simple gatherers or hunters with a nomadenary way of life. They practice the nomadism of a people at home on the water and along the shore. [illegible] engaged in obtaining food and are, therefore, appropriately referred to as "water nomads." Almost all day long they travel in their canoes along the intricate water channels or hunt on the shore. When they are not doing that, they squat in the hut, which is always erected on the shore near the water line. Only occasionally and for special purposes do they leave the shore and push inland to the center of the island. The surface of the water and the narrow strip of coast are the field of action and the sphere of life for the Yamana. Whatever they encounter here in the form of plants and animals determines their economic activity and is indispensable for their standard of living. The large sea mammals, the indigenous species of seals and whales, play the most important role. Sea otters and sea birds are no less important. Finally, from among the lower animals, nothing could rival the mussels and large crabs. Hunting and gathering these things constitute the chief part of the economic activity of the Yamana. The vegetable kingdom offers practically nothing, hence our natives rely exclusively on a meat diet.

422 The vegetable kingdom and the products of the bays furnish the raw materials for their property in goods. As a matter of principle, these possessions are of such a nature that they not only do not impede unrestricted wandering, but ensure the acquisition of everything needed for subsistence and, above all, facilitate hunting and gathering. All their property is limited to what is absolutely essential. As such, this is so little that a demanding, civilized human being marvels at such perfected self-sufficiency. This is a result of the fact that every item beyond the limit of what is indispensable would be a burden that would become more grievously oppressive the longer one carried it around.

382 Preparedness for uninterrupted movement precludes fixed dwellings from the outset, either in the form of individual establishments or community settlements. A loose, carelessly constructed hut served as shelter for a night or for a few days.

/487 cont./

223 224 long, slender shaft furnished with a running loop of whalebone" /translated from French/. The end piece is attached to the tip of the shaft by a knot in the lashing of sinew. It is surprising that this whalebone noose, [illegible], is put together with two pieces, a long one and a short one. The two run side by side for a few centimeters and are lashed with sinews; the short one ends in a small loop-knot. We also find this same overlapping

[171] in every one of the whalebone loops on the long snare-line of the Selk'nam (Vol. I, 282), whereas on that of our Yamana each whalebone loop is one strip only (Fig. 58). A [illegible] consisting of two parts is more effective and more durable; our Yamana are convinced of that. But why they do not use these two-part loops on the long snare-line no one could tell me. Probably the people avoid the greater effort, since the work of making a snare-line is laborious enough.

223 We need not explain specifically how this snare-rod is used. It is, of course, put forward unnoticed by a man hidden in a suitable spot, drawn over the head of a bird, and immediately pulled in with a sharp jerk. The principle of the noose is exactly the same as in the case of the long snare-line. The natives even use a single whalebone noose without any kind of shaft to catch birds. Herewith we have adequately described and characterized the threefold way in which the whalebone snare is used by the Yamana.

Y. Mussel Perch, Mussel Breaker, Crab Perch

226 [243] The shellfish of the sea have the same importance for the diet of our Fuegian as bread, for instance, has for the European. Many of them he can gather on the beach, others he must take out of the water. The two types of mussels which are found there, namely [illegible] (*Mytilus chilensis*) and [illegible] (*Mytilus edulis*), occur in vast quantities. They are larger and tastier the more abundantly they are covered with water even at lowest ebb tide and the stronger the current is that swirls around them back and forth. It would be impossible to pry them animals loose with one's hand, as one can, for instance, the smaller and less tasty ones that every ebb tide uncovers.

/498 cont./

226 the leaves each individual shell, breaks it off from the place where it is lodged, and lifts it up. The enamel fork almost always lies in the front part of the canoe between the harpoons and spears of the husband, since it is called here.

227 When the Indian women, walking on the uncovered 228 sea-floor at ebb tide or wading in the water, break off the [illegible] if she own a pointed stick which I call the enamel breaker (Fig. 43). This is nothing more than a sturdy stem or [illegible] stout branch of Borbera Sicifolia. The husband makes it for his wife. He removes the twigs smoothly but leaves the bark, since its rough surface always assures the hand a firm grip, no matter how thoroughly the stick is soaked with sea water. It was just mentioned that the wood of this bush is very tough, yet soft and pliable. Another type of wood would seldom stand the strain of the springy movements which are necessary to pry off the enamels. At the bottom the enamel breaker is cut off in the shape of a chisel end with a dull edge so that it can easily dig deeply enough into the clustered accumulations of enamels. The woman is very adept at handling it effectively.

/229/ If she does not happen to have it, she reaches for a /Fig. 43 appears here/ stick the length of an arm which she cuts to a short, dull point. With this weapon she pokes into the clusters of enamels, moving the upper free end back and forth until the individual animals are loosened.

230 The very tasty oxyuranes are also appreciated by the [illegible] Tarasca as a delicacy. We refer to the large agile (Ulbodes amarillus) and the small nimble (Pachnoda gemulosa). These animals are found there in considerable numbers and constantly move up and down the coast on the sea floor according to the movements of ebb and flow. They are always, however, under a considerable amount of water. The natives are not always successful in diving to catch them because they may in the depths and seek to 231 escape. Hence a long implement has been invented which it seems suitable to call a crab fork and which the Tarasca call [illegible] (Fig. 44) Its basic form corresponds precisely to the

Fig. 43.
Shell Breaker.

/583 cont./

23/ kept alive; otherwise it is one day devoured. This explains why in early summer in the hut of the Indians we find at least half a dozen young birds, all very familiar with each other, although they usually belong to different species. They belong to the family (198), so to speak, and are a plaything for children.

198. Lothrop (b):159 "has seen young upland geese and gulls thus tamed" /cited in English/.

B. Food From the Vegetable Kingdom

262 The inclement weather of the Cape Horn Archipelago permits only a few types of plants to reach maturity, and the soil yields only a very few things that the Indian can use for food. A vegetable diet has no basic significance for them. It would be inaccurate to speak of actual subsistence on the vegetable kingdom. The Indian gets only a small taste from it now and then, which, as such, is unanimous and, in /584/ comparison with his meat consumption, quite unimportant (199). Neither Nature

199. Fitz-Roy (a):185 expressed himself very definitely on this point: "Of vegetable food they have very little: a few berries, cranberries, and those which grow on the arbutus, and a kind of fungus which is found on the birch-tree, being the only corn used" /cited in English/.

voluntarily offers him fungi and berries of various kinds, and these, as we realize, are mere condiments. They are gathered 263 only by women and girls; men strip off a few fruits in passing and immediately pop them into their mouths without any kind of preparation.

262 1. Fungi. If we consider the conditions of vegetation in the Fuegian region, we are not surprised to find a great abundance of mushrooms and fungi there. /Fig. 66 appears here./ There are no very poisonous kinds. Some are spongy; others have a woody

222 /554 cont./
[262]
texture. These do not tempt the Indian since the supply of tasty fungi is large enough as it is, and he does not care for them particularly. Everywhere one finds goodly quantities of a few Cyttaria species, among which Cyttaria darwinii Berk. is the most common. The latter is in general known as ēsēf; when it is ripe it is called auácix. It grows on the protuberances or excrescences (Fig. 66) of a particular spot on the beech branch, known as amáif or ēsamáif. Each of these fungi reaches the size of a green, unripe walnut and is absolutely round and yellowish-white. One is right next to another, and they break off at the slightest touch. Women and girls break them off from the branches they can reach with their arms. After they have combed a particular area of the forest for them, the woman asks her grown son or even her husband to help her gather the ones on the higher branches. For decency's sake females are not permitted to climb trees or walk over branches; the men are called in to do this. The latter pick the fungi with their hands and toss them down, or they pick them off with their toes and drop them. Women gather them up and carry them in little baskets to the hut (300).

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Fig. 66. Beech Branch with Growth. One-half natural size.

300. Bridges (MM:VII, 120;1873) once mentions that an adult male Yamana gathered these fungi and brought them to the camp. If he was alone in doing this, it is a rare and exceptional case.

222 With the exception of the brief period of mid-summer, the Cyttaria darwinii are always found on trees and are edible in any

/554 cont./

222 phase of development during all the other months (301).

301. Outes (g):52 has collected descriptions of this type of fungus from the pens of several observers. In addition to this there are data by Spencer: 64, 100, 103.

/555/ A less widespread variety, and fully matured only in the autumn, is ašim, Cyttaria harioti F. BD:46 writes ōšuyim, "a small dark brown pear-shaped fungus which grow in clusters out of an excrescence which forms on the wood like a band" /cited in English/. This yellowish-brown, pear-shaped fungus, ranging in size from an orange seed to the seed of a small wild cherry, appears in rows on thin branches of the Antarctic beech. One can very easily strip off the whole row with one's half-closed hand and catch them in a small basket. The black uškēyon mēma (Cyttaria hookeri Berk.) is still smaller, the shape and size of a grape seed. It likewise forms on beech branches in rows.

[162] Although women and girls like to pick these two kinds, it is not their habit to gather them and bring them to the hut; they eat a few handfuls on the spot. The men do likewise, but less often. The ašim (Cyttaria haroti) is much preferred to the other.

Other types of fungi are of less importance to the Indian woman than ēšēf (Cyttaria darwinii). The latter is easy to obtain along the edge of the forest, whereas the other kinds are to be found chiefly or almost exclusively inside, in dark shade and in thickets. Women almost never go that far, or perhaps only to fetch wood, but they almost never go deep into the forest just to gather fungi. The large tree fungi, ēman, are valued the most as long as they are still soft and meaty, and among these yēlus above all, which, according to BD:649, is "a soft, watery, and large flesh-colored fungus" /cited in English/.

262 The Fuegian eats about ten kinds of fungi (302), but I am

302. Bridges mentions "one very important item in the food of these people, which is fungus, of which there are about twenty varieties, some one or more of which are all

/555 cont./

262 the year round abundant /cited in English/ (MM:III,116;1869). He is saying a little too much in the first part of this statement.

not in a position to give all of these their exact botanical names. It is very remarkable that he eats only those that grow on trees, never those growing on the ground. Each species matures in one particular month, which is why the Indian could at any time give himself a little variety in his monotonous meat diet by using fungi. "Fungi of many kinds are also all the year round much used as food, different kinds coming in at different seasons" /cited in English/ (Bridges [a]:213).

222 262 [25] It is left to each individual to hunt occasionally for a few fungi whenever he feels like it. The only ones actually gathered are the very common Cyttaria darwinii which are strung up on small sticks in the hut and kept for a time in a dried state. Bridges (MM:VII,121;1873) is obviously exaggerating when he attaches special significance to fungi in the daily household of the Yamana. [26] When there is a famine, however, the people use fungi to help out as long as they can find them. Aspinall:270 expresses himself more accurately when he speaks of the individual foods in order of their importance: "For their subsistence [these Indians] are dependent solely on the hunt; /556/ in an emergency they content themselves with a diet of mussels. Digestive difficulties that may result from this are healed with a diet of fungi." Fungi are neither more nor less than a rare, occasional addition to the main diet.

222 2. Berries. It is obvious that the Yamana can enjoy berries, amăim, for only a few weeks. The most common are amăiiŏgurĕ, the fruit of Pernettya mucronata which sometimes covers extensive areas in the form of a low shrub (Fig. 12 /untranslated; see foreign text, p. 121/). In spite of the hard points on the leaves, women and girls move through the bushes and pick the ripe crimson berries, gather them in their little baskets, and take them to their hut. Less common in that region is the /Fig. 67 appears here/ smaller Pernettya pumila (Fig. 67), the fruit of which is called ŭanamăim, and the somewhat taller Empetrum rubrum, aĭána, the fruit of which is known as ŭĕpisamăim. These two bushes have only small fruits which attract the Indians less.

/556 cont./

222 The ripe berries of Berberis buxifolia, hŭmĕrˀ amā́in, taste good and are much sweeter than the berries of Berberis ilicifolia, čeljamā́im. The former are easy to strip from the small twigs by hand and gather into a basket. An Indian woman would not bring home large quantities of these berries because a handful of them is all that anyone wants, but anyone who happens to pass these bushes strips off several berries and eats them immediately.

The small Rubus geoides, one of the Rosaceae, creeps along the ground in light patches of the forest and on the edge of it. Its fruit, pálaxlačix, which ripens in late summer, resembles a raspberry in size, shape, and color, but is less sweet. Women pick these also, but only when they are gathering šĕpisamā́im and

[137]

Fig. 67. Pernettya pumila. Natural size.

amā́ir◇gurˀ and inevitably come across isolated fruits of Rubus geoides. Our Indians do not have a taste for the fruits of Myrtus nummularia, but they like to pick the easily obtainable hŭpusamā́im, the clusters of the hŭpuˀ bush (Ribes magellanicum), which likes the light and grows chiefly on the edge of the forest.

/557/ This concludes the list of the berries that are considered at all edible in the region of the Yamana. The fruits of Gunnera magellanica, for example, have almost no meat, and therefore no one touches these tŭxalamā́im. This is also true of the small fruits of other species.

262 3. Other Plants. Other products of the vegetable kingdom can be regarded as actual food to an even lesser extent than is true of fungi and berries (303), but there are a very few plants, as

303. Bridges' (k):227 way of expressing himself is therefore misleading: "The

/557 cont./

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natives use the following plants for food: the roots and leaves of the uryata, and the roots of the ouwunin and yeshama" /translated from Spanish/. These are not food in the true sense of the word.

Hariot:402 correctly explains, "that the natives eat only in case of absolute necessity" /translated from French/. Among these are, first of all, ǯwǻnim (Osmorrhiza chilensis), the roots of which are gathered by women and girls during times when food is scarce, as well as yexama (Armeria chilensis), and finally wiyata (Taraxacum magellanicum). With the roots of the first two (304)

304. These two plants are meant when Bridges says: "The roots of sea anemonies, and of a plant resembling parsnip, are much used for food and are generally baked" /cited in English/ (VP:XIII, 214; 1866).

[752]

and the leaves of the last mentioned the Indians appease their hunger (305). Of the two species first mentioned Bridges main-

305. Despard mentioned incidentally: "Today the natives gathered and ate large quantities, unwashed and raw, of a species of dandelion [Taraxacum]; they relish it very much /cited in English/ (VP:VI, 129; 1859). Compare Hariot:402 and Hyades (q):338.

tains, with not a little exaggeration, that the Indians "extensively use the roots of sea pinks and of Owwǻnim" /cited in English/ (MM:III, 116;1869). Celery, hǻǻun (Apium australe), is by no means a nourishing plant; nevertheless a person will occasionally put a stalk in his mouth and chew on it. He does this in order to give himself a change of taste and also to prevent vomiting (306).

[751]

306. In this connection Bridges contradicts

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/557 cont./
himself. For instance, he says (MM:III, 116;1869): "Though celery abounds everywhere, they never use of it" /cited in English/; in BD the root of this plant is several times and very definitely referred to by him as an "edible root" /cited in English/.

[252] Some people like to roast the celery root at the fire and then chew on it.

232 462 It can be seen from these accounts that plant food is seldom eaten by the Yamana, hence it is almost always a single individual who sets out to look for it if he feels a desire for it. It would be unjustified, therefore, to maintain that the gathering of such plants is a special activity of the woman.

A cursory review of the contribution of the Indian woman to the subsistence of her family makes us realize that she performs an important service, mainly through gathering shellfish. The things she collects not only bring necessary variety into the monotonous meat diet furnished by the man, but seem indispensable at certain times when hunting is impossible. With her diligent gathering the woman very often saves her family from suffering considerable hunger.

/558/ 6. The Food Quest throughout the Year

182 In their manner of living and above all in everything they must provide for their sustenance, our Yamana are and will remain inescapably dependent on their environment. They have adjusted to this inevitable pressure in all their economic adaptations, not the least in their implements and weapons. Darwin (d):248 confirms this in his own way: "Nature, which has made custom an irresistible force and its effects hereditary, has adapted the Fuegan to the climate and the products of his miserable fatherland." The causative factor in the two explanations is essentially different.

181 The mental attitude or disposition of this Indian group, however, also betrays an unmistakable conformity with their area of

/560 cont./

22 At this time also the seals guard their newly born young on the beach and are easy to get at (p. 39 /untranslated/).

The gathering activity of the woman is somewhat more dependent on the various seasons. This, obviously, applies first of all to the hunt for berries which ripen in late summer and in the fall. Cyttaria harioti can be picked in the fall and in the first half of winter. With the beginning of summer Cyttaria darwinii are also matured and remain on the trees until shortly before the end of winter. The cold season is not suitable for fishing with a line (313). On the other hand, sea urchins (Echinodermum) taste

313. Bridges (j):25 referred to "many kinds of smaller yet valuable fish, chiefly plentiful through summer and autumn and early winter"/cited in English/. Hyades (q):339 also confirms this. See footnote 290.

best in July and August, that is, toward the end of winter. In the spring girls and women busily hunt for birds' eggs as long as the opportunity lasts. They rejoice when the terrors of winter are past and the providing of food is made easier for them by the warmer season.

221 262 The variety that the Yamana family can count on in obtaining food is limited in these few details. Their safest supplementary source throughout the entire year is the inexhaustible amount of Mytilus mussels. All Indian women can successfully dip into this source when there is no other prospect. Despite all this, the family is not spared a few days of hunger if in some spot even the supply of mussels is exhausted and they cannot proceed elsewhere because of bad weather. As we have said, mussels have the same importance for the Yamana as bread has for Europeans, and they tire of them just as little as Europeans do of bread. Finally, we should like to remind the reader that the individual periods of the whole year are determined according to the various stages of development of Cyttaria darwinii. This does not mean, however, that this fungus contributes to any extent to the diet of our Indians (p. 277). Despite the very slight variations, the monotony of a meat diet exclusively continues all during the year.

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147 result of the way they are forced to sit and to work, not, however, of their diet.

262 To every stranger the most striking fact is that the Fuegians can get along with almost no food from the vegetable kingdom. What they eat in the way of fungi and berries occasionally, but always in modest amounts, cannot bear comparison with their uninterrupted meat diet. It is obviously an exaggeration for individual travelers to regard their eating of Cyttaria fungi as worth mentioning. The berries of Pernettya and Berberis have no nourishment, nor have the stalks of Apis, the leaves of Taraxacum, and the roots of Armeria. Cereals, that is, bread and flour, legumes and tubers, fruit and vegetables are unknown to the Fuegian. In summer a person will sometimes eat three or four handfuls of amáiŋ-gur at one time, which are the berries of Pernettya mucronata, or šépisamáim, the berries of Empetrum rubrum, and if there is a famine, he will eat only Cyttaria fungi for a few days. This, however, can never be upheld as a vegetarian meal (331) since it is obviously only a slight refreshment, an

331. The members of the Mission Scientifique maintain with Hyades (q):338 about the Yamana: "We never saw them make a meal of only vegetable foods" /translated from French/. Other reliable observers report it just as scarce.

expedient, or a very occasional tickling of the palate.

263 The invariable meat diet in itself scarcely gives them any real desire /570/ for salt, although all the meat is extremely fat. The meat salts probably suffice for the human body, and beyond that it gets, almost unconsciously and unnoticed, a not inconsiderable amount of salt from the sea water. In the shells of Mytilus and other mussels, in the calcareous shells of sea urchins and crabs, there is always a small amount of sea water, even though the contents have been cooked. When pieces of [252] meat of birds and seals are washed off, the Indians prefer to use sea water from which a tiny amount of salt inevitably remains on the meat.

/570 cont./

263 [271] on the meat. Finally, without conscious intent, the Indians take the ocean spray, even larger drops, into their mouths when it strikes their faces while they work in the canoe or on the beach. These individually very insignificant particles of salt I should estimate as a not too small daily total in view of the high salt content of sea water (332). The Yamana need a somewhat larger

> 332. We look in vain for any reference to this among those Europeans who have only expressed their astonishment at the absence of salt. All the missionaries and many travelers report that the food is not specially salted, for example, Outes (g):52, Hyades (q):339, and others. The latter (d):306 also maintains: "Sea salt as a condiment is unknown and would not be appreciated" /translated from French/; it is much sharper than cooking salt, as is well known.

amount of salt than the Selk'nam because they eat considerable amounts of light fat daily and because the meat juice of all the animals they consume contains far less salt than guanaco meat. This amount of salt is supplied to their bodies unconsciously, so to speak, but very definitely, and for this reason they do not need to sprinkle additional salt on their roast.

It is not surprising that the Fuegians are also unacquainted with any kind of spices and stimulants. Without reservation Hyades [276] (d):306 emphasizes: "They do not use any intoxicating, narcotic, or stimulating substance" /translated from French/ and adds in another place (f):564 that they do not have "condiments." This designation includes pepper and nutmeg, cloves and caraway, 262 vinegar, and similar things. Liquid fat, however, from seals and whales, if one wishes to include that here, is very often taken in small amounts (333), but it serves the natives as actual

> 333. Hyades (f):564 confirms that "seal oil is very much enjoyed and that the natives drink it with pleasure in small amounts, before or after the meal" /translated from French/.

/570 cont./

262 nourishment of very considerable importance.

For sweets, which they must painfully do without, they show
263 almost a passion, probably for that very reason. They have only temporarily at their disposal the ripe berries with low sugar content from the well-known shrubs. In early summer they take the nectar out of the blossoms of máku (Embothrium coccineim) with their tongues, chew the sweetish petals of the rare Philesia buxifolia, and suck the sweet young shoots of Poa flabellata, the type of grass that they use as litter for their beds (p. 31). Finally they peel a piece of bark from young tree trunks in the spring. /571/ Exerting pressure, they scrape a mussel shell along the exposed fibrous layer, from below upward. In the process the sweetish sap, uškéx, collects in the mussel shell and they drink it. All this taken together is still only a tiny amount of sweets.

263 177 Nowadays our Indians always procure sugar first whenever possible, and that abundantly (334). As may be expected, they

334. Along with other observers Hyades (f):564 emphasizes that they show "a real passion for natural sugar and heavily sweetened substances" /translated from French/.

use it indiscriminately and lavishly. They are guided, however, not so much by the physiological need, but far more by their enjoyment of it (335). Their partiality for onions is also re-

335. I noticed the same behavior among the Selk'nam (Vol. I, 293).

markable. The cooked meat of crabs, especially axíya (Lithodes antarctica) and štekáluš (Paralomis verrucosus), is very tasty prepared with a little vinegar and chopped onions. The Yamana, without exception, are enthusiastic about this. Nowadays if they cook a meal of beans or rice or other legume, they naturally use cooking salt; only when they do not have it do they stir up the mixture with sea water. The addition of salt is demanded in this type of food which tastes flat even when larger pieces of meat of

261 /575 cont./
days of need are over, they recover /576/ surprisingly fast; serious after-effects or a weakening of their health scarcely ever appear. Habit has taught them how best to overcome the brief periods of hunger without harm.

• 262 439 Ever since the Yamana have had easy access to the various farms, they have bartered there for all kinds of European food and luxuries, such as sugar and wine, coffee and tea, onions, canned tomatoes, and other things. They also acquired cooking pots, in which they prepare our foods so that they are reasonably tasty. This strange diet, however, is not good for their health. [14] Besides toothache, other physical ailments appear, which the people in olden times were fortunately spared despite all kinds of deprivations.

2. How They Divide the Booty

225 We must insert here a few data about the way in which larger pieces of game are used. On the one hand we shall mention obligations of a social nature, for which we shall later give more detailed reasons. On the other hand, the receipt of a gift cannot be compared with ordinary food-getting. Since, however, in the case of the most important animals hunted, namely, seals and whales, there is a definite obligation to let others share it, we shall most conveniently describe here the prevailing custom.

Every local group greets with indescribable rejoicing a whale that has been driven inland or deposited on the beach. Dense swarms of sea birds announce this extraordinary gift of nature. According to the general conception, any man who has first seen or touched the whale is the owner of it, not, however, in the sense that he alone may eat of this animal, the enormous masses of which he would, in any case, be incapable of coping with, but only insofar as it is up to him to arrange an orderly distribution (347).

347. From an earlier period when whales were still plentiful Bridges (a):208 reported: "Certain persons, those who first found the whale, have the right to distribute it" /cited in English/.

/584 cont./

252 same thing is done at the other end. These blubber sausages, yáiyi, are easy to handle and they are hung up in the hut on strings. Often they are also filled with the fat of seals. Sometimes a larger amount of blubber is collected in the stomach of a sea lion.

Another kind of sausage, known as kéti, is made from the blood that collects in the abdominal cavity of a freshly killed sea lion or guanaco. It is poured into a soft, not yet dried piece of gut which, as we said before, is tied shut and placed in hot ashes. While it is roasting, they poke small holes into it with a small pointed stick, to keep it from bursting. Furthermore, they collect the heart, lungs, liver, the stomach walls cut into pieces, and the blood and fat tissues of a cormorant or wild goose, stuff all these small parts into the alimentary canal of the bird, knead them thoroughly on the outside with the fingers, and let them roast in hot ashes.

The women always have a supply of dried, short pieces of gut in order not to miss the frequent opportunity of collecting blubber. They also save /585/ the large, firm alimentary canal of the álakuš (Tachyeres cinereus) which they have previously blown up and dried. They like this particularly well to fill with blubber because it is easy to get and because it is wider than the alimentary canal of other birds.

262 It is well known that mussels are the chief ingredient in the diet of our Fuegians (358). Other shells and snails, which are

358. Bridges is entirely right when he says: "Mussels are to the Firelanders what bread is to the Englishman -- the staff of life all the year round" /cited in English/ (MM:X, 58; 1876). M'Cormick:I, 315 had already used the same comparison: "Limpets [are] their favorite food, and, as bread is with us, their staff of life" /cited in English/.

found there in much smaller amounts, are also eaten (359). The

359. Hyades (f):563 confirms this: The

/585 cont./

262 mollusks are the one somewhat constant article in the native diet" /translated from French/.

252 The preparation of the double-shelled mussels is a simultaneous steaming and boiling. When the Indian woman tears the mussel loose under water, it shuts its two valves tight; it does the same when it is exposed by low tide. It retains a few drops of sea water inside so that its breathing organs do not dry up. When it is placed in the heat of the fire, these drops are heated inside and finally turn to steam. By the time the force of the steam tears open the locked shells, the meat is tender. Thanks to the slight amount of salt in which it is steeped, it is really very tasty. Snails and crabs, as well as other lower animals, such as chitons, yēkér, are steamed in hot ashes, hence they are drier and nowhere near as tasty as ē'xuf and kecóin.

This concludes the list of foods which the Fuegian prepares in a special way. Almost all of them originate in the sea or on the shore. Bove (d):291 thus maintains, very correctly: "The sea furnishes the principal foods of the Fuegians. Fish, limpets, crabs, seals, aquatic birds, in short whatever the sea produces forms part of their diet" /translated from Italian/. In the vegetable kingdom it is only fungi of the Cyttari species which are not often specially prepared, but are dried by being skewered on small sticks, strung up to form a chain, and put near the fire. Fungi gathered in winter and completely frozen are laid near the fire to thaw. Celery roots (Apium australe) are roasted in hot ashes. Only a few things are eaten raw (p. 324).

4. How They Eat

264 The entire conduct of the Fuegians at meals is repulsive to a European. To condemn them for this would be unjust because they are completely deprived of many comforts which are taken for granted by us in our ordered circumstances. Nevertheless, they, too, are guided by certain rules in eating. Sometimes they show extraordinary self-control. Finally, they do not by any means take anything and everything indiscriminately, just to satisfy their voracious appetite or to fill their stomachs.

262 /586/ The general opinion that each and every one of them is consciously selective in eating and in food-seeking is fully justified. Their first criterion is the degree of savoriness. Accordingly, they prefer one animal rather than another, one piece rather than another of the same animal, and appreciate a young animal more than an old one of the same species. They do not hunt herons or owls because the meat of both is too scant and too lean. The bat, apawáta, is very much like a rat, hence it is scorned and no one dares eat it. All petrels and gulls are rejected, just like the diurnal predatory birds (360), because they

360. Darwin (d):246 says: "Jemmy Button did not want to eat any land birds because they ate corpses." He may have meant the diurnal predatory birds.

live on animal carcasses and putrid meat. This is why the fox and rat, wēsína, wuasína (361), are repulsive to them, the black rat,

361. Bridges (a):206 says very definitely: "Foxes, on account of their propensity to eat the dead, are, with rats, held in the greatest detestation" /cited in English/. Hyades (f):562 makes a distinction: "The fox... is eaten only when they are pressed by hunger" /translated from French/, and in (h):21 he says that of rats "the natives have a great horror" /translated from French/. Dabbene (b):186 gives as the reason "that these animals eat human cadavers" /translated from Spanish/. This induces him to draw the obvious conclusion: "This fact in itself is sufficient to demolish all the accusations that they are accustomed to anthrophagy" /translated from Spanish/. Martial:193 and Cojazzi:110 agree with this literally, likewise Wieghardt:37.

pēakaasana, as well as the gray rat, aiinaasana (p. 36

/586 cont./

262 /untranslated/). If, in a period of great hunger, they would have to eat a fox or an otter (362), they are unreservedly emphatic

> 362. Fitz-Roy (a):184 says that "the otter is valued, excepting the body part, which they seldom eat unless hard pressed by hunger" /cited in English/.

about the sharp, bad taste of the meat. With the exception of the fat and meat of the whale, the Yamana do not touch putrid or moldy meat (363). Of the latter species, the southern whale,

> 363. Fitz-Roy (a):184 maintains, and Lovisato (b):142 uses almost the same words, that "they eat any thing and every thing that is eatable, without being particular as to its state of freshness, or as to its having been near the fire" /cited in English/. This general statement, however, is misleading.

lémuka (Balaena australis), is most prized because of its tasty meat. On the other hand, the finback, čiyix (Ziphius spec.?), is not touched because its fat has a laxative effect. Fitz-Roy (a):185 asserted that "the fins of a dead whale are esteemed" /cited in English/, but the liver of the whale is rejected. The fat of the large grampus, špíjači (Orcinus orca), is thought to be poisonous, and for this reason alone no one touches it.

Our natives are dependent all the year round on mussels and snails, čipíala, and they know very well that these animals are not uniformly tasty at every season. From each small pile that they have gathered, they conscientiously reject the pieces that are not as good as others or even bad. They say that the [753] meat of the large Voluta snail, hélen, in certain areas is harmful for the brain; it makes people dizzy, and they lose their balance in walking. Anyone /587/ who observes these symptoms after eating this snail leaves the unfavorable place and warns others. [752] This type of snail, as well as a few other, smaller ones are always put into the fire first, after which the fleshy foot is torn out.

/587 cont./

262 This is all that is eaten; the adjoining soft parts are thrown away. Strangely enough, the Yamana reject the tender meat of the Solen, the evenly shaped shells of which serve them as knife and scraper. Several green and brown algae that White settlers there like to eat are rejected by our natives as a matter of principle.

262 177 Not anything and everything that Europeans like and that they offered the Foegians was accepted by them. They have to this day very emphatically rejected many things, for example, cow's milk. Other things, such as wine and other alcoholic beverages, they accepted only later. Hence it is not just the taste that makes them decide on one thing or another. Beyond that they reserve for themselves a freedom of choice that cannot be influenced.

262 262 In part this also comes out in the different procedures used in the preparation of individual foods. Above all, meat may never be roasted long enough to become quite dry and hard. They find it most wholesome when it is still red inside. They are always intent on providing themselves whenever possible with their favorite blubber sausages (p. 309), because they do not want to be without blubber, kun, for long. Since they do not have vegetables and spices, they get a little variety into their diet with the liquid blubber. The craving for fat in those damp, cold regions is probably also a factor. A person who wants to eat the berries of Pernettya mucronata or the dry Cyttaria fungi pours oil from the whale or sea lion into a large Mytilus shell and dips each piece into it before putting it into his mouth. In the same manner he eats certain mussels or pieces of meat from birds if the meat is dry and tough. Sometimes the dried Cyttaria fungi are soaked for a longer time in oil. The small [illegible]i, as well as other fish, after they are baked in ashes, are dipped into the oil before they are eaten. Our Foegians lack the most necessary items to prepare their food in a somewhat better and more complicated fashion; they are curtailed and impeded in all directions.

Only a few things are regularly eaten raw by them, except when they are in serious distress. This includes berries, especially those of Pernettya mucronata, and all fungi, most of which, like [illegible]ilel, have a spongy meat. They like to pick the large Cyttaria

/587 cont./

• 262 252 darwinii from the beech boughs while it still has a smooth surface. Its texture is then very elastic and pleasant to chew. Old, dry pieces are soaked in blubber shortly before they are eaten. The so-called "tongues," apax, actually the sex organs of the sea urchin, Ikii (Echinus), are picked out of the broken calcareous shell with the fingers /588/ and immediately eaten; the milky liquid in the shell is drunk also. The abundant iodine content of these parts stimulates the appetite, which is why the Indians often eat them (364). Naturally, they eat all of these things im-

364. Martial:192 reports: "The sea urchin remains their favorite dish and is always eaten 'even when one is not hungry,' our interpreter told us, and willingly demonstrated this rule" /translated from French/. Contrary to the view expressed by Hyades (f):564, we should like to repeat that the above-mentioned parts are always eaten raw.--It is well known that the tongues of sea urchins are regarded as a delicacy in Argentina and Chile and are chiefly eaten raw with all kinds of condiments.

mediately after these animals have been taken out of the sea. The soft meat of Fissurella, ɛ̃ɔgu (amɛ̃ɔku in the western dialect), and of Patella, aywɛ̃ɔa, is squeezed out of the calcareous shell with a slight pressure of the fingers and is eaten without any preparation, except that occasionally the little morsel of fish is dipped into seal blubber. Some people find the raw fat of the young whale tasty. With the exception of the unimportant things mentioned here, every Yamana regularly exposes his food to the fire or the almost equal effect of hot ashes (365).

365. Spears:76 repeats a word from Bridges: "I have never seen or heard of the Yahgans eating any kind of meat or fish raw except certain kinds of limpets" /cited in English/. Previously Snow (a):I, 345 had already

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assured us: "Their common way of cooking is to put everything into the ashes until sufficiently done for their taste, or until their hunger could allow them to wait no longer" /cited in English/. All later observers, for example, Hyades (p).328, vouch for this general rule.

262 Although the Fuegian literally lives from hand to mouth and sometimes finds himself in dire distress, he still shows an astonishing amount of self-control in eating, and this is sometimes forced on him by certain rules. We refer to his duty to cut up the booty he has brought home and let the neighbors share it (p. 314). Moreover, not every individual has free access to a stranded whale, but is content with the pieces that are given him by the chosen distributors (p. 308). Finally there are a few definite food taboos on certain occasions, which everyone observes. A law given by Yoiŋo says that berries -- actually, only those of Pernettya mucronata -- may not be gathered prematurely, and that they must be left on the bushes until old men declare that they are ripe. If some people should discover favorable spots where there are many berries, they warn their friends and neighbors: "There are many amáŋa there, but wait until they are ripe!" If, nevertheless, some women and children should look for that place and pick the berries, subsequent visitors will find the bushes empty and will say: "amáŋa apáia, the berries have gone away!" This means that the berries removed themselves in revenge and expiation for that forbidden act. Since the culprits are not known, but the bushes are actually stripped of fruit, the entire occurrence is given a superstitious interpretation. /569/ This is supposed to prevent the berries from being picked before they are ripe. At certain times determined by ancient custom, only a little food or only certain things are permitted, as, for instance, during the initiation, during the first menstrual period, after confinement, and so forth. In general everyone adheres to this conscientiously.

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[illegible]

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Only occasionally is a person carried away to real immoderation in eating. Anyone who eats hastily and greedily is called Wímja which is anything but respectable. Everyone is supposed to control himself sufficiently in eating so that others always

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regard him as moderate and slow. Modest and concerned reserve is very much praised (366). When several people are together,

> 366. Earlier Despard (b):690 mentioned that the Tarumie "hold gluttony in great abhorrence. In their language the word for gentleman is 'swallower'" /cited in English/.

they watch each other; the one who acts as though he would rather not eat a thing makes the best impression. Within the narrower family circle people are emphatically warned of mistakes of this nature in the presence of a stranded whale, for now there is great danger that someone will let himself go too far, given this favorable opportunity. In all this there is probably also an unconscious warning against damaging one's own health. It has been proved that the human stomach does not tolerate the great amounts of fat that are suddenly offered it. It is necessary to become somewhat accustomed to it (367). There is another

> 367. Bridges (MMS IX, 13.1873), on April 20, 1874, observed the ravenous appetite of several families: "The natives have suffered much temporary pain from eating the whale, and I hear that this is usual at first, but passes off with the continued use of whale-meat" /cited in English/. That a certain habituation is necessary for a normal digestion when large amounts of fat are eaten.

danger. Whale fat is considered tastier the longer the animal has lain dead in the water; it then melts by itself and is known as *abura* in this state. Not infrequently there is serious poisoning when such putrified fat and meat are eaten, as missionaries have repeatedly reported.

For example, we have the following description by Lawrence, dated March 28, 1887 (MMS XXI, 173.1887): "A canoe brought

1. Canada--DIA 0-6 (1919-1934) 1607 0355 Telegan 0358

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[to Ukkusiksalik] the sad intelligence of several Telegam and Oke Indians being poisoned from eating fish...(369). The melancholy

369. From data given below we realize that a whale is meant.

disaster having taken place among the natives now engaged by Mr. Bridgen upon the farm [in Puamo Hobenson]" /titled in English/. Lawrence went there personally (369). "We found the

369. Lance Lathrop (D)-188 more precisely determined the place where this whale was deposited on the northern edge of Bathurst Confederation.

people still suffering from the effects of poison. Nineteen men, women and children (Oke and Telegam) had died during the past week, the others were slowly recovering" /titled in English/. Lawrence saw the hopeless condition of these people. "Arriving at the place, we found them scattered about. Three men and several children were lying in a very weak state, two of the former were unconscious most of the time...We went a little further and found the lifeless body of a man who had apparently died /[18]/ about two days before...Near the body of the man we found in different places five dogs which had died from the same cause. We also found in another place part of the body of another man, the rest having been destroyed by two dogs...I will now give a few particulars of the circumstances. About a fortnight ago a canoe arrived at Down-east, and brought the report that a small whale had been found in Pierre Island. They went over in Mr. Bridgen' boat, and found part of it, lying on the beach, which they brought back, and having some doubts about its quality, at first hesitated to eat it, but afterwards were persuaded by the Oke saying they had eaten such before. All who were there having eaten a little, felt very unwell on the morrow, and gradually became worse, and in a few days those whom we suppose had eaten more than others succumbed...[Others] suppose it to have been a sword fish [o Xiphias /Oxyo gagellanus/, p. 37 /unreviewed/]. It was about seven feet long. I have also been informed that of

/5061 cont./

late years they have not made use of such, having previously understood it was injurious" /cited in English/.

A similar case, soon after, created no less serious disorder, and Burleigh wrote about it on December 26, 1888 (MM:XXIII, 88,1889). "Numbers of people were suddenly stricken down with blood-poisoning through eating rotten blackfish (370). The wig-

370. This probably simply means a whale.

wams were in a terrible state -- men, women and children lying about as helpless as infants, unable to keep anything on their stomachs on account of their disordered condition. Two old dames, fully powdered and dressed in their feathers (otherwise naked), went from case to case, and would now and again pause in their performance of rubbing and yelling at their patients. I administered emetics and other medicines and gave much relief. Most of the cases yielded to ready treatment, but in three families fever followed. Death followed in one case only" /cited in English/. According to this, the Yamana were sometimes in danger of being poisoned when they unwisely ate the fat of large mammals, not only of whales, but of seals also, which had been dead for some time (371). Faced with these large animals, our

371. On December 20, 1875, Bridges (MM:X,81,1876) wrote: "These natives will readily eat animals and birds that have died of themselves, and to this fact is owing much of the mortality among them. Thus Jemmaxe some time ago came across a dead seal. He brought it here, made a general distribution, and on the second day it had all been eaten. It made the people smell disagreeably. It was very foul" /cited in English/. He is obviously mistaken when he maintains that the Yamana also eat birds that have died by themselves.

Indians seem at times to abandon the strict self-discipline of which

262 /590 cont./
164 they are capable in other circumstances.

Every traveler has frequent and ready opportunity to observe
264 their conduct while eating. It is anything but beautiful. Usually
252 the individual squats beside the fire and waits until the piece of meat in the embers or ashes is done. He takes it out with a little stick, lets it cool a bit on stones or bits of brush lying about, and picks it up with /591/ both fists. Sometimes the piece is still so hot that he cannot hold it. Even so, he tears off large bites with his strong teeth and swallows them without ostensibly chewing. From a large roast the pieces are torn off more than bitten off and swallowed in sizable chunks. Strangely enough, the Yamana chews very little. This applies also to the sometimes tough meat of birds. He quickly swallows hot morsels that he cannot keep in his mouth and following them sometimes takes a swallow of water or a small lump of snow (372). Since they

372. The Selk'nam have the same habit (Vol. I, 297).

quickly put the too hot morsel into their mouths, they constantly make a sucking sound while they move it around in their mouths.

When the mussels that were shoved onto the embers are done, they burst open by themselves. They are fished out with a little stick and allowed to cool a bit on the ground. Then in one hand the Indian takes the shell to which the meat adheres, holds it horizontally, breaks off the empty shell with his other hand, and with his fingers tears out the meat which he immediately pops into his mouth. Finally he holds the flat mussel shell itself to his lips, since the drops accumulated in it are very tasty, and sucks them in noisily. Snail shells are broken into pieces with a handy stone to expose the roasted contents, and the same is done with the calcareous covering of the tasty sea acorn, lépa (Balanus psittacus).

Blubber sausages and the less common blood sausages are opened at one end, held up to the mouth, and the contents fall in. They place baked fish on the trampled earth and separate them with their fingers, the thumb nails used chiefly. The large crabs, axíya (Lithodes antarctica), as well as stekálus (Paralomis

/592 cont./

264 by no means only a few tidbits; it is almost always a considerable amount, so that the total during a single day is astonishingly large. Every observer will agree with the words of Spegazzini (a):171: "These people have no set time for eating; they eat all day, they eat whenever and whatever they please, and according to what I saw, they eat a great deal" /translated from Spanish/. As we have said, at any one time they take liquid blubber, kun, in only small quantities, but all the more frequently; /593/ a man or woman will sometimes empty a blubber sausage ten centimeters [431] long in one draught (378). Visitors like to bring it along as a present.

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378. Hyades (f):564 mentions: "They are likewise fond of the oil of the liver of morne, but always small quantities at a time" /translated from French/.

With the exception of mornings and evenings, everyone begins to eat whenever he feels like it. This is the general custom. One is more likely to be stimulated if he sees someone else chewing and he will join him. There is never much preparation involved. A person will reach into a basket of mussels or will tear off a piece of meat from a sea lion or a bird hanging on a beech tree in front of the hut and place it on the fire. Everyone helps himself, and whatever supplies are in the hut are at everyone's disposal (379).

379. The words of Hyades (p):328 that "women and children eat with the men" /translated from French/ do not mean anything.

Everyone acts as though it were completely taken for granted and not a disturbance to his neighbor if he moves near the fire at night and satisfies his appetite undisturbed. The only rule generally [515] observed is that in the morning before the first bite is taken one rinses out his mouth with cold water and spits it out again. Most people are more particular about this than about daily morning ablutions. While the individual pieces are roasting in the fire, everyone watches them attentively, turns them often and meanwhile increases his appetite. He tests them with his fingers or

/701 cont./

843 activity, especially to those young women who are expecting their first child. Sexual intercourse is discontinued for two or three months before the confinement.

843 During this time the married couple are required to observe a few food taboos. The /702/ woman may not eat roasted pieces of 262 meat, mussels, or fish as hot as usual, but must let them cool off a bit. It is said that food that is too hot is now detrimental to her and her child. The man is not permitted to eat the head and hind portion of fish and birds; he must be content with the center piece. Shortly before the confinement neither of the two parents may eat the meat of cormorants, otherwise the child would be born deformed.

[824 137]

Fig. 78. Embothrium coccineum. One-half natural size.

/Fig. 78 appears here./ For a few days before and after confinement the woman herself may not break or crush the bones of birds. It is well known that in the case of some birds, especially cormorants, the longer bones are broken open before they are roasted in the fire, so that the marrow will penetrate the meat and make it juicier. Furthermore, their spinal columns are cracked at various places so that the feathers can be plucked more easily. Now if the woman

/702 cont./

843 who herself abstains from the meat of cormorants and, even better,
● 262 from birds generally wishes to prepare a roast for her family, she either leaves the bones whole or she asks someone else to break the bones in the meat of the bird. If she herself were to do it, she would have to be prepared to give birth to a crippled child. The woman must also abstain from sea urchins, but the man is not required to do this. He may not break open the calcareous shell, however, but must have someone else do it, otherwise the child would be born with a split skull (119).

119. Calderon told me this in August, 1923. As a result of searching questions I obtained the impression that this superstition is connected with the greater or lesser width of the fontanel with which the child is born.

843 When the external indications of pregnancy point to an imminent confinement -- this was unmistakable in former times when nakedness was customary -- the relatives and neighbors are more concerned in their thoughts and speech with the two persons who /703/ are soon to be presented with a child. They also discuss the expected event with the young couple. There are always several women on hand with good advice, especially for a woman who is giving birth for the first time. They encourage her with the following prospect: "Soon you will hold your own child in your arms. What happiness and what joy you will feel! -- It is indescribably gratifying for a woman to take care of her own child. -- Only then *will you be a real woman*, when you have a child of your own, and this will soon happen!" Old Mary repeated these words to me as the basic ideas behind such reassurances.

844 Women who are giving birth for the first time receive special attention. They are supposed to move about constantly or at least walk a great deal and to gather wood and berries diligently, in other words, to sit as little as possible. The things that were told the girl on the occasion of her first menstruation are now repeated, and special emphasis is placed on what was said about the treatment of newborn babies. The constant encouragement, together with the restless activity, hardly gives the young woman time to become

/707 cont./

immediate surroundings are quiet; small children are either sent far away or held in check; finally, all the dogs are forcibly kept silent.

From the day of delivery both parents (p. 495) must very conscientiously observe the regulations familiar to everyone. The mother refrains from taking any kind of nourishment for the entire day. This assures her of a good delivery and the future well-being of her child. For his part, the man may neither fell heavy wooden beams in the forest nor kill large game animals. He may neither break open the bones of birds to get out the marrow nor crush the shell of the sea urchin. In case he should fell decayed trees or split wood, his child would have an open wound on its breast. If he should break apart the wing bones of birds, the arms of his child would also break; if he should pluck out the feathers of a bird, his child would soon lose its hair. On the day of the birth he is just as restricted in his choice of foods as his wife is on this and the following days. She is permitted to eat again on the day after her confinement, but at first by no means everything. She limits herself to fish, as well as ɛ̈auf (Mytilus chilensis), kɛ̈ɛ̈in (Mytilus edulis), and amɛ̈ɛ̈ku (Fissurella). She is not permitted the many other lower sea animals. These mussels must come from "good" places [in the magical sense], in other words, not from places where one suspects the lakúma /water spirit/ might be nor from places where there are many cormorants and sea lions. It seems to me that the magical fear comes from the fact that these animals do not play a favorable role in mythology. A single species of duck, namely, Mareca sibilatrix, also belongs to the "good" things. On the other hand, the meat of the sea duck, ɔ̈ɔ̈ka (Tachyeres patachonicus), is forbidden. When things to be eaten are unavailable or not present in sufficient quantities, the yɛ̈kamuš /shaman/ must help out. Stretching out both hands, he gathers up the "bad and harmful," /708/ holds it for a moment on his open palms and, with a strong puff of air from his mouth and a softly uttered "ft," blows it away. Now the food has been freed of everything "dangerous" and is no longer harmful.

Directly after the child has been separated from its mother, the woman who has been the midwife goes out of the hut and sends a message to the father by anyone who is available that a boy or a

/718 cont./

Cape Horn Archipelago acknowledge the loving and sensible treatment given them by almost never crying. This strange fact was observed by various travelers. Spegazzini (a):167, for example, reports: "I noted that the children there never cry; they are always happy and contented, whether it is cold or hot, with their completely Adamite clothing" /translated from Spanish/ (149).

149. Hyades (q):193 says of his observations of a new living creature on its first day: "The baby rarely cried and not for long"; the mother "calmed her baby when it cried with little pats on the back" /translated from French/.

The Fuegian little ones really have no reason for making the whole neighborhood aware of their discontent or displeasure by howling and crying, for they come into the world healthy and are not hindered in their movements in the fresh air; they are also abundantly nurished and given all kinds of attention. /719/ Other factors, however, may play a part here; I am thinking primarily of an effective, unconscious influence of the environment. One should visualize how deathly quiet the whole family is in the canoe while they stalk game and steer in its direction. All the persons in the boat are breathlessly attentive until they have reached their booty. Even the low cry of an infant would spoil their success. How the motionlessness of the adults is able to hold the child in check is not easy to explain, but it cannot be denied. A baby that is ill or not sufficiently fed, however, makes itself known loudly enough. Finally we must remember that the Yamana in general are a taciturn and quiet lot.

Every Fuegian mother regards nursing as a duty to be taken for granted. What old Luisa impressed upon me in 1920 was later repeatedly confirmed. All the women emphasize that shortly before and long after confinement they must eat chiefly Mytilus mussels; otherwise their milk would be worthless, it would be less nourishing, and their babies would cry all night long. On the Cape Horn Archipelago it is unknown for a mother not to have enough milk, and Hahn (a):806 assures us that "all mothers are abundantly provided with milk" /translated from French/. The child announces when he is hungry by restless movements of his head and his whole

/754 cont./

881 wood, gather mussels, pick berries, etc. In all this the girl is willing and eager and behaves very submissively and quietly. Her whole expression shows gravity and inner concentration. The girl also clearly shows these traits when she performs work at one of the neighboring huts. She keeps her eyes cast down and moves as though she were afraid and intimidated. She may not look at the moon or stars, nor at the sun and rainbow, much less adopt a comfortable or negligent attitude.

/755/ Once I was standing with Nelly when Adelheid passed by. She was completely preoccupied, her head bowed; she was looking at the ground with half-closed eyes and moving forward almost furtively. Nelly carefully pointed to her attitude and said softly: "This is the way every tu'ikipa behaves!" She is supposed to preserve the same retiring attitude and a quiet withdrawal until her first child appears; at any rate it is expected of her just before her first confinement. After she has given life to her first-born, she may be somewhat freer in her ways and talk happily and animatedly.

881 As may be expected of our Yamana, they require the girl
262 to fast strictly upon this occasion. Originally she was given nothing to eat or drink during the first three days; not until the fourth day was she given a total of three mussels and a little water at intervals. Since most girls, however, begin to feel weak before the end of this time, they are immediately given a few mussels or something else to eat, but always only good things and better pieces, since ordinary things would be physically harmful to them. With the sixth day the food and drink restrictions are in part removed. Before the end of this period, on the eighth or tenth day, the girl must bathe and wash in sea water; then she is given a piece of guanaco meat, if there is any in the camp. If she had not taken her bath before eating this piece of meat, the dog that tracked down the guanaco would forever lose its scent and would henceforth not be able to find other guanacos. The tu'ikipa is forbidden to kill any animal. If there is an opportunity to do it, namely, at the time young birds take flight, she gives the animals she has caught to a man who kills them

/755 cont./
for her (191).

191. In Hahn (a):804 we read: "The first menstruation takes place between 14 and 15 years of age. The first appearance of the menses is celebrated by the parents and their friends. Nevertheless she is considered impure, and for four days the young girl is obliged to abstain from certain foods" /translated from French/.

In order to emphasize effectively the rule to eat little or nothing, the women tell the following story: "Once a tú'ikipa sat alone in a canoe. She knew about the restriction yet she secretly ate a few berries. Soon a strong lakúma /water spirit/ came along, seized this tú'ikipa, lifted her out of the canoe, and devoured her. He left only her intestines, which other people afterwards found on the beach. Now they knew what had happened. That is how this disobedient girl was punished." Every girl is given this warning on the occasion of her first menstruation.

The women regard the urgent admonitions they give the tú'ikipa as more significant than the above-mentioned restrictions. In connection with this I learned from Nelly and Mary that the tú'ikipa is above all given instruction in the duties of a married woman and mother, as well as in her conduct /756/ from now until marriage. They recommend to her as the foremost virtues willingness to help and to please others, industry, and unselfishness. She is gravely warned against secretly yielding to an importunate chap because the result would be an illegitimate child (p. 411). By this time the girl is sufficiently enlightened about sexual life and knows where children come from. Many observations from earliest childhood have helped her obtain this information (p. 392). Every tú'ikipa has ample opportunity immediately to practice the virtues listed here; we have just spoken of this above.

Besides these things I also learned the following definite admonitions from Nelly, which I repeat here verbatim and without change.

/912 cont./

X881 264 869 eat, the adults try to make almost no sound. Meanwhile the candidates, well covered with pieces of leather, are sent to the area near the secondary entrance, for they are not supposed to realize that the other people are eating. Before the cover is removed from the faces of the uˈwi̯ala, all the food remains which could arouse suspicion are removed. Meanwhile the uˈwi̯ala are told: "Every glutton or lazy person falls as prey to Yetáita and is devoured by him!" Thus we see that this opportunity, too, is used to increase the candidates' fear and terror of Yetáita.

If, in the course of the day, the adults wish to take a few extra bites, they hang something over the faces of the uˈwi̯ala or cover their faces entirely with a piece of leather. Some person while eating will throw a piece of meat into the fire and say in an audible voice: "This is for Yetáita!" This, too, is supposed to encourage the candidates' false belief in this spirit.

X881 264 The actual meal is soon disposed of, for scarcely anyone has his fill. When a person eats he grasps the piece of meat with one hand, and with his other hand closed in a fist, he makes a rolling motion of the arm toward another person who is likewise eating or to whom he has given a piece. /913/ This gesture is supposed to indicate that one courteously extends an invitation to the other and is enjoying the food in his company.

Now and then, when the mood strikes the leader, a special delegation is sent from the ˈxɛ́xaus hut to the cookhut to fetch something to eat between meals. The leader and two or three men selected by him break into the customary general singing with a very loud, high-pitched xos three times. This is repeated at intervals and finally sounds like hõxoˈ. For the women in the cookhut it means nothing less than an urgent request to prepare something quickly which they can hand over to the delegation. Again, a few minutes pass and the hõxoˈ is repeated. Finally the two men dash out of the secondary exit, hasten to the cookhut, and disappear inside.

[272 262] One evening I saw them take along a painted pot. Amid continuous calls of "hõxoˈ" it was filled with coffee for them; at the same time other women impaled a large loaf of bread on a pointed stick and placed it in the hand of one of the two men. With this "booty" they hastened back to the ˈxɛ́xaus hut where they

/1121 cont./

769 resembling a yamalaĕemŏina into each čiĕyaus celebration, even if no one had died meanwhile. During this ceremony they vividly remembered in particular those persons who in former years had taken a very active part in the affair. The other groups now and then imitated this custom. While it was going on, the participants, each to himself, thought about the deceased person whose loss was most painful to them, and they painted themselves to indicate the manner of his death. A true Yamana can never quite forget his dead, even though their names are no longer mentioned.

765 262 It has already been mentioned that for a few days the nearest relatives of a deceased person take almost no nourishment. Their neighbors and friends generally follow their example, especially if a murder is being mourned. Formerly even children were made to fast, and everywhere there was strict quiet. In order to carry out all this undisturbed, /1122/ the mourners sometimes retired into the nearby woods and stayed there for a few days and nights, weeping and moaning beside an open fire. After that they returned to their dwellings. The women who told me this were unstinting in their admiration for the hardiness of their countrymen of former times and frankly confessed that they themselves lacked the strength and perseverance for such feats.

767 Although everyone willingly participates in a song of mourning, there is a type of wailing woman who may on occasion assist someone. A person will invite these women if he himself has no near relatives, for with the loss that death has inflicted upon him he feels his isolation all the more painfully. Shame also plays a certain role in the case of a person who clearly feels that the death he mourns is a punishment for wrongdoing and who is made conscious of it by others. During the first few days nature quite impetuously demands her rights and the mourner expresses his grief without restraint; later he is sometimes overcome by consciousness of his guilt. According to ancient custom, the lamenting, groaning, weeping, and singing must continue for several weeks. Sometimes distant relatives or friends chosen at random are given this duty. On occasion, as so-called aruŏmaia ŏiŏaqwaia, they render an outstanding performance. Men also may do this, and they act on special invitation; indeed they are enlisted, so to speak, and receive some reward for their efforts. These so-called weeping women simply repeat the customary

/1304 cont./

uttering a loud, hissing ǯ sound. The purpose of the latter is to weaken the baleful effect of the sea duck and hold in the késpix of the children. Immediately after confinement the mother and her husband may not eat the meat of the déška (p. 503). The parents are advised to abstain from it until their child enters the second year of life. From then on it is completely out of danger, whereas before that it might possibly die if its parents should often eat the meat of the seaduck.

When the rust-colored pectacled ibis, léxuwa (Theristicus melanopis), flies over the heads of mature girls, they cross their arms and press them against their breasts to hide them. If they did not do this, léxuwa would pull their breasts far down; this is a beauty flaw of which they complain a great deal. This léxuwa is also known as a sensitive woman who anxiously guards her honor.

I did not learn that the Yamana are superstitiously afraid of any kind of insects, but Bridges (a):212 writes: "Many insects are also much dreaded, from a belief that they enter the ear, and work their way into the body, and thus kill those they enter" /cited in English/. Dabbene (b):204 says the same thing. Unfortunately, these references are too general.

Sometimes an unusually large cap-shaped shell (Fissurella) clings to a rock along the coast, below the lowest water level. It is regarded as the mistress of that region. All the women who are gathering marine animals in its vicinity must remain silent and respectful. If they do not do this, the pʃiakakípa, as it is called, causes strong sudden [illegible]. The word pʃiaka is not a proper name, but a general term (compare BD:370); here it has its special meaning. The little hole in the flat shell is "the eye with which pʃiakakípa sees everything that happens around it."

If a father has lost a son in death, he abandons the male animals that he kills or he throws them into the water. If a daughter has died, he does not touch the female animals that he catches. He does this for several weeks after the death of his child to express his grief over the loss and to avenge himself, as it were, on Watauinéwa.

/1307 cont./

821 789 who confronted him, he had a broad band of white from his chin downward, and his head was bound with the skin of a kelp gander with white down on it, and his hair was also whitened. He had a white stone in either hand. His antagonist, who came leaping along making much noise, was /1308/ armed with a club. He kept on demanding what facasi [a term for seals, penguins, and other sea birds] would let him kill some one, as though he thirsted for blood. He held his club ready to use it, and they both spoke excitedly and loudly to each other. Presently Lasapowloom threw one of his stones a full yard behind his opponent's heels, and ran after his stone to pick it up again. Presently looking to where I heard much noise I saw two others, highly painted fellows, engaged in loud vociferations and earnest gestures, each with an arm round the other's neck, and bobbing their heads each to the other. The rest stood quietly looking on.... Lasapowloom acting the part he did, was according to custom, called tsworoo, or the storm of wind; the man who met him was called tumoozsworoo, or one who invited the storm to rage against him" /cited in English/ (MM:IX, 13;1875).

I cannot help thinking that the superstitious customs and ceremonies aimed at influencing the weather in favor of personal wishes and intentions have developed among the Yamana only to a limited extent simply because their Watauinéiwa is regarded as the actual ruler of the forces of nature. Hence everyone turns directly to him as the first and surest helper, using the ancient traditional prayer formulas (p.978).

• 262 834 In addition, there are a few similar superstitious customs which are clearly wise food taboos. They are supposed to promote self-control and check selfishness. A few such decrees have already been mentioned. Thus, for example, no one may pick Pernettya berries until they are ripe. If anyone should ignore this, the "berries would go away" (p.327). Anyone who gathers amáim at the proper time may nibble a few, but anyone who eats many of them brings on bad weather by his lack of restraint in eating. It is easy to catch this disobedient person, and he is severely reproached in case there is a sudden change in the weather. The primary object of this taboo is probably to force each individual to bring all the berries he has gathered into camp

/1308 cont./

262 824 [821] and let the others share them, instead of selfishly enjoying them alone. People from another region who land on strange territory and find large quantities of amáim may neither pick them nor eat them. If they do, they must be prepared for threatening weather when they continue their journey. Their taking the berries would portend ánačiwa, ruin and destruction for them.

262 824 821 The "rain berry," palaxáčis, Rubus geoides (p.279), may be eaten only in fair weather. If someone has discovered a spot where there are great numbers of these berries and he wants to gather them, he must first obtain permission from the táuina who has the right to distribute them to adults and children. A person who picks the palaxáčix without such permision or in /1309/ rainy weather must be prepared for a sudden heavy storm with rain on the open sea, which will endanger his life, as atonement, hínečí, for his disobedience. On March 16, 1923, there was an unusually heavy cloudburst with floods. Two days earlier a few girls had stolen off to a place that was well known for its many palaxáčix -- it is about an hour's distance from Punta Remolino -- and picked these berries. In all seriousness Nelly told me on the evening of March 16th that the young Halakwulup, Julia, had gone to this place with a few other girls. Julia was unfamiliar with the taboo, and she had picked and eaten many of the berries. The other girls followed her example. The heavy rain was a punishment for this.

262 It is not at all seldom that sudden bad weather breaks out over the wide inlet open to the south. In this region it is customary not to eat certain game animals that have been caught on the same day, but to keep them until the following day. A person who does not conform to this must be prepared for a heavy loss in the immediate future. This custom is probably meant to teach people to provide for the next day, for all too often a family is unable to travel because of unfavorable natural forces, and they could suffer great hardship if they had not learned and were not compelled to economize with their already meager supply.

264 821 484 The Yamana very seldom eat during a canoe trip and, if they do, always very little. Anyone who eats may not throw food remains and refuse overboard, but should destroy them in the fire which is always kept burning. It is said that Yoálox decreed this.

THE YAHGAN

By John M. Cooper

INTRODUCTION

133 **Natural environment.**—The *Yahgan* habitat is archipelagic, the mountainous islands constituting the last outposts of the Andean chain before it dips beneath the sea at Cape Horn (map 1, *No. 1A;* 132 map 2).[1] Atmospheric temperatures at sea level differ somewhat from locality to locality, with a summer mean around 50° F., a winter mean close to the freezing point, and a winter minimum around 10° F. Snowfalls not infrequently occur even in the summer months (pl. 38). Relatively very cold or very warm spells are usually of short duration. Sudden changes in temperature, in wind velocity, and in sunshine, cloudiness, and precipitation are characteristic. Violent squalls and strong gales are common.

139 The islands up to about 1,500 feet altitude are heavily wooded, chiefly with beeches (*Nothofagus betuloides* and *N. pumilio*, evergreens; *N. antarctica*, deciduous), together with Winter's bark (*Drimys winteri*), "cypress" (*Libocedrus tetragona*), and lofa dora (*Maytenus magellanica*). The forest floor is thickly covered with rotting and rotten fallen trunks, which with the thick spiny masses of barberry bushes (*Berberis ilicifolia* and *B. dumetorum*) and holly (*Pernettya mucronata*) make travel through the woods extremely 136 slow and difficult. Foxes and rats, the land mammals that could have helped in the *Yahgan* dietary, were eschewed. Marine mam- 135 mals, fish, and other sea food were abundant in most localities. As 134 a result of the foregoing conditions, the *Yahgan* lived mostly on the water and along the shore line, penetrating inland very little.

131 **Territory.**—In the last century and probably from much earlier times the *Yahgan* regularly occupied the southern coast of Tierra del Fuego Island from about the eastern end of Beagle Channel to Brecknock Peninsula, and the islands south of this line to Cape Horn. But they evidently wandered more widely; *Yahgan* house sites and implements have been found as far north as Elizabeth Island in the Strait of Magellan (Bird, 1938, p. 260). Between Good Success Bay and the eastern end of Beagle Channel, there was considerable

[1] [illegible]

2: Cooper E-4 (no date) 1946 SI46 Yahgan SI46

114 culture. If this large and expensive monograph is not accessible, the following more important papers may be consulted: Gusinde (1931–39, 1934, 1935 a, 1935 c, 1936 a, 1936 c, 1937, 1939 b, 1939); Koppers (1935 a, 1935 b, 1936 a, 1936 b, 1937, 1938 a, 1938 b).

For bibliographies of the *Yahgan* see: Cooper (1917), for sources, with comments on each, to 1917; Lothrop (1928), for sources from 1917 to 1928; Gusinde (1937), for selected and added sources, and for evaluations (pp. 49–191) of the publications of the more important first-hand observers.

19 **Language.**—The *Yahgan* language with its five mutually intelligible dialects constitutes a distinct linguistic family, with no known relationship to any other. The older Bridges' *Yámana-English* dictionary, the one completed in 1879, contains about 32,500 words, a carefully restricted, not a padded, list, as he himself emphasized (1933, p. xvii). *Yahgan*, in contrast to *Ona*, is markedly euphonic. There were no words for numerals beyond three, and none for fractions.

164 **Population.**—According to our first dependable estimates, the *Yahgan* population, in the third quarter of the 19th century, totaled between 2,500 and 3,000 souls. In 1881 a sharp decline set in. By 1884 numbers had dwindled to about 1,000; by 1886, to 400; by 1900, to 300; by 1908, to 130; by 1913, to less than 100; by 1923 to 40. The immediate causes of the sudden drop in the eighties were the respiratory diseases and a severe outbreak of measles in 1884, followed by epidemics of typhoid, whooping-cough, and smallpox. Syphilis does not appear to have played an important role. Contributory, or rather basic predisposing, factors were, it seems, the then introduced European ways of life, especially the clothing, but also the food, alcoholic beverages, and type of shelter and work.

CULTURE

ECONOMIC ACTIVITIES

231 **Foods.**—The *Yahgan* had no domesticated plants, and no domesticated animals except the dog. Whether the earlier pre-Columbian and post-Columbian *Yahgan* had dogs is uncertain. No bones of dogs have been found in early archeological sites in *Yahgan* or other Fuegian territory. The earlier explorers—L'Hermite, 1624; d'Arquistade, 1715—make no mention of the dog in their descriptions of *Yahgan* culture, as note is made of it among the *Alacaluf* by the 18 accounts of them prior to Narborough's of 1670. The dog was first recorded among the *Yahgan* in 1833 by James Weddell; it is recorded consistently thereafter by later observers (Cooper, 1917, pp. 186–187). Dogs were not eaten.

2: Cooper E-4 (no date) 1946 3355 Yahgan SH6

262 Lothrop (1928, p. 32) rated the relative importance in the Yahgan dietary of their foods as follows: (1) Mussels of first importance, numerous; (2) sea-lion, seals, and fish of many kinds; (3) next, porpoises, gulls, and bird eggs; (4) clam, whales, limpets, crabs, sea urchins, geese, penguins, cormorants; (5) last and least, otter (chiefly in the west), guanaco (only in the east), condor, ducks, berries (especially wild black currants). The fungi eaten were those growing on trees; those growing on the ground were not eaten. Some wild celery and wild parsnips and two varieties of cress and young shoots of tussock grass were also eaten. Foxes were eaten only in famine as a last resort. Salt was not used.

225 Hunting.—Seals were hunted with spear or harpoon from canoes or from land (pl. 36), or killed with clubs. Whales were occasionally hunted in the open sea with spear or harpoon; stranded or dead whales were eagerly exploited. Dogs helped in otter and fox hunting.

223 Cormorants were taken at night by torchlight with clubs; also with a pronged wooden gorge hook. Birds were taken with pole snares (fig. 11, *d*) and with single or multiple tether snares of sinew or whalebone. No lifting pole snares, deadfalls, or pitfalls are reported.

224 Fishing and sea-food gathering.—Mussels were gathered by hand; limpets, with a flat-ended stick; sea urchins, with a four-pronged wooden fork; crabs and other Crustacea, with a harpoon or a three-pronged stick. For taking sea food, the Yahgan also used a spear with two diverging shanks, or two to four spears lashed together. Women fished with a kelp stem or braided whale-sinew line, that had a shipbeet of whalebone or of quill at the end, instead of a hook, to hold the bait; slowly drawing the fish to the surface, they would grab it by hand. Fishhooks were probably lacking. Weirs of branches or stakes were used. True fish nets were absent. The nearest approach thereto was a small basket attached to the end of a pole and used as a sort of dip net for diminutive fish.

251 Food storage.—Limited quantities of dried Ulva fungi were stored; so too was oil, especially whale and seal oil.

415 Food preparation and eating.—Large mussel shells were used for melting fat and holding grease. Water was heated and grease melted by dipping hot stones into them, but there is no record of stone boiling proper.

Shells of large mussels were sometimes used as plates; shells or bark baskets as cups; hollow bird bones or reeds as drinking tubes.

CAMPS AND HOUSING

361 There were no permanent villages. Certain groups of natives re-
227 lated exclusively by blood and marriage frequented and occupied more or less fixed separate localities within the respective five sub-

2: Cooper E-4 (no date) 1946 SHS Yahgan SHS

437 [439] [805] [486] rency of any kind, and no weights or measures. Barter was carried on among the *Yahgan* themselves, with the *Ona* and *Alacaluf*, and with the Whites. Barter by exchange of presents was common; a gift was made, regardless often of the wishes of the recipient, who could not refuse it without affronting the giver, and who was definitely expected to give something in return.

768 428 Inheritance played a very minor role. Much or most of the deceased's property was burnt with the body. The person's dog fell to the oldest son or other near relative or acquaintance. Some of the more valuable or useful property might be bartered or given away to distant persons. Such burning, bartering, and giving away were intended to take from sight what would cause sorrow to the survivors by reminding them of the beloved departed, and to signify the survivors' desire not to profit by the death.

685 Stealing was considered decidedly reprehensible; but thefts actually occurred, even among their own people, not as daily matters, so to speak, but it would seem, not very uncommonly. A habitual thief, who failed to reform, was in the end boycotted—a severe punishment under *Yahgan* living conditions.

594 Generous sharing of food with kin and friends was the rule. Hospitality was extended as a matter of course.

46 **Labor.**—Neither wage nor slave labor existed. There was a little, but not much, labor in common. Each family was a relatively independent economic unit. The division of labor was almost exclusively a sexual one, with no organized or unorganized craftsmen making their living by specialized trades.

462 The man's task was to hunt marine mammals, otter, guanaco, and birds, to make his own weapons, to build and repair the canoe, to do the harder work in hut building. The woman's task was to care for the younger children, to cook, tend the fire and look after the hut generally, to paddle and have general management of the canoe in which the family spent so much of its time, to do all the skinwork and leatherwork, such as preparing skins, sewing clothing, and making skin bags and pouches, to make baskets, and, last but not least, to collect mussels, much of the fish and other sea food, eggs, fungi, and berries. [902] Since mussels were the chief food resource, the woman's part as provider was an extremely important one.

[502] Probably her crucial role as food provider had a good deal to do with her relatively high status in *Yahgan* society. Certain tasks fell to men and women jointly, such as building the hut, and hunting from the canoe, when the man did the killing while the woman maneuvered the craft. All in all, if we take into account *Yahgan* living conditions, although the list of women's tasks is longer than that of the men's, actually the sexual division of labor appears to have been a fairly equitable one.

3: Lothrop E-5 (1924-1925) 1928
5316 Yahgan 5316

TABLE 1.—ECONOMICALLY IMPORTANT FLORA OF TIERRA DEL FUEGO

137

English	Spanish	Latin	Ona	Yahgan
beech[1]	haya	Nothofagus antarctica	chan[2]	kamchaus
beech	roble	Nothofagus betuloides	chenque	mamtil
beech[1]	ñirre	Nothofagus pumilio	kenkenkenk	lahgan
gulfweed	hoja chora	Macrocystis angustifolia	kaiker[2]	akiker[2]
Winter's bark	canelo	Drimys winteri	chalel	akinkaia
cypress	ciprés	Libocedrus tetragona	——	——
holly	chaura	Pernettya mucronata	yuk[2]	gus
barberry	calafate	Berberis buxifolia	ogeg	kamuk
barberry	calafate	Berberis ilicifolia	——	chilla
lichen	——	Chilenorchnum confoederatum	gleerk	yiyu
——	chaurilla	Endocarpon cocciferum	——	sal'ga
——	——	——	chiverkain	apalik
grass	juncos	Juncus magellanicus	tai	mikpi
fungus	——	Cyttaria darwinii	yilkow	owachig

137
263

Although the Indians of Tierra del Fuego subsisted chiefly by hunting and fishing, they did not overlook the food value of various berries which grow on the island. Of these the most easily obtainable is the barberry, which flourishes everywhere. It is a variety different from the red-berried barberry (*Berberis vulgaris*) found in northern climes, for it looks and tastes not unlike our tomberry and makes an excellent stewed fruit. There there is the red berry of an arbutus, similar to our cranberry in size and shape but rather tasteless; also what is locally called a "strawberry" (*Rubus geoides*) looks like a raspberry, tastes like a blend of peach and papaya, and grows half underground.

The Ona are said to collect grass-seeds (called tai) which they grind to a paste and eat, but this I did not see.

There are ten or more kinds of fungi on Tierra del Fuego, which, according to Rev. Thomas Bridges (1886), were eaten at various times of year by the Yahgan. Of these the most important both to the Ona and the Yahgan was a brilliant orange growth (*Cyttaria darwinii*) found on beech trees. When ripe, it is mucilaginous and rather insipid. The Yahgan still dry this fungus on rods and preserve it for winter use (fig. 5). Darwin remarks that since

[1] This tree is an evergreen.
[2] Word borrowing is suggested by the similarity of Ona and Yahgan terms.

3: Lothrop E-8 (1924-1925) 1928
3986 Tehgan 3986

137 the introduction of the potato to New Zealand, Tierra del Fuego is the only part of the world where cryptogamic plants form the chief vegetal diet.

However, the Fuegian Indians failed to utilize many native food plants of value, such as wild celery, two kinds of cress, wild sorrel, wild parsnip, scurvy grass, and mushrooms.

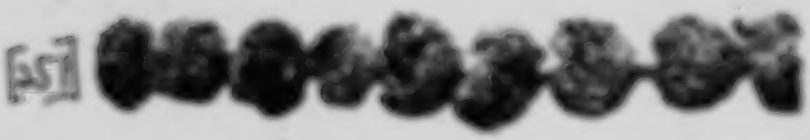

FIG. 5.—*Evagil* dried on a rod for winter use. Length, 0 in. (46,2270)

137 No description of the flora of Tierra del Fuego can omit mention of the gigantic kelp (*Fucus gigantea*) which almost everywhere fringes the coasts. Though the stems are not thick, they often exceed a hundred feet in length. Darwin[1] picturesquely writes: "I can only compare these great aquatic forests of the southern hemisphere with the terrestrial ones in the intertropical regions. Yet if the latter should be destroyed in any country, I do not believe that nearly so many species of animals would perish, as would under similar circumstances where kelp grows with the kelp. [illegible] the leaves of this plant numerous species of fish live, which nowhere else would find food or shelter; with their destruction the many cormorants, divers, and other fishing birds, the otters, seals, and porpoises, would soon perish also; and lastly the Fuegian savage, the miserable lord of this miserable land, would enjoy his wretched life, decrease in numbers, and perhaps cease to exist." The kelp forms an excellent breakwater and mooring for canoes, but is in an impenetrable barrier to swimmers and has prevented many unfortunate occupants of overturned canoes from safely reaching the shore. Its appearance on the surface of the water may be seen in pl. iv, top, and pl. vi, top.

FAUNA

136 From the Indian point of view what made Tierra del Fuego a [illegible] habitation was the edible fauna, which in turn

[1] 1839, p. 203.

3: Lothrop E-5 (1924-1925) 1928
3395 Yahgan 3395

136 tantalum to our notions, formed the principal meat diet of the Fuegian Indians. Wood was the only asset of the guanaco not utilized by the Ona, for lacking knowledge of weaving and ability to organize in large numbers, they never rounded up the wild guanaco to shear them, as was done to the llama on a large scale under the Inca dynasty in Peru.

For the Ona, second place in importance among the land animals falls to the fox (Ona: *mash*), one of the two varieties of which grows to an unusual size. I have been told that on occasions of great scarcity the Ona in Tierra del Fuego have combined to form parties in the fashion of wolves, and it is then well for a man to avoid them. Fox was sometimes eaten by the Ona, and the skin was occasionally used for robes, if guanaco were scarce. Two kinds of bags (*Ashi*[a] and *Ashun*) found in every Ona household were made of fox-skin.

A small burrowing rodent (*Ctenomys fuegianus*), known in Spanish as the *tucutuco* or *cururo*, was eaten by the Ona, who dug up the burrows with sticks. In places large areas of the Fuegian plains,

TABLE II.—FUEGIAN FOODS[1]

136 46

	Ona	Yahgan
[illegible]	[illegible]	[illegible]
fish	[illegible]	[illegible]
shellfish, etc.	[illegible]	[illegible]
birds (chiefly to summer)	[illegible]	[illegible]
mammal (in summer)	[illegible]	[illegible]

[1] Putative relative importance of foods is indicated by asterisks.